

SKILLS FRAMEWORK FOR FOOD MANUFACTURING SKILLS MAP - FOOD TECHNOLOGIST

Sector	Food Manufacturing			
Track	Research and Development			
Occupation	Food Science Professional			
Job Role	Food Technologist			
Job Role Description	<p>The Food Technologist develops and improves products through experimentation, performs tests on food ingredients and product prototypes, and ensures that correct methodologies are used to generate information for the required food quality and consistency standards. He/She holds a strategic role in the organisation, supporting the production function by providing food science expertise in designing processes to manufacture new food products with the required specifications on a commercial scale, and supporting the business development function in profiling products for marketing purposes and meeting regulatory requirements for sales and export.</p> <p>The Food Technologist may work in a food science laboratory and/or participate in cooking sessions in new product development. He should have good sensory skills to perform evaluations of flavours and to create new recipes and/or formulations for products. He should be able to work independently and possess analytical and problem-solving skills to improve manufacturing processes.</p>			
Critical Work Functions and Key Tasks	Critical Work Functions	Innovate new food products	Propose process control, sampling and monitoring points and related performance parameters to achieve critical material attributes of final products	Performance Expectations (For legislated / regulated occupations) In accordance with: <ul style="list-style-type: none"> • ISO 22000:2005 - Food safety management systems • Singapore Standard (SS) 590:2013 • SS 444:2010 • Food Safety System Certification (FSSC) 22000 • Good laboratory practices (GLP) • Good manufacturing practices (GMP) • Specifications within the <i>Codex Alimentarius</i>
			Create product prototypes through experimentation and laboratory tests	
			Participate in ingredient development and execution of related laboratory activities	
			Explore new applications of existing products and processes	
			Evaluate products' characteristics and shelf life for implications on quality and scalability	
			Establish product specifications and documentation	
			Formulate product refinements based on sensory testing and consumer data	
	Conduct tests for food quality	Guide sample collection activities, ensuring compliance with specified procedures		
		Perform appropriate actions for any abnormal occurrences affecting sampling conditions		
		Guide testing activities to ensure correct test methods, conditions and processes are employed		
		Conduct follow-up tests on samples that require attention		
		Perform physical testing on food products from new mass production lines		
		Document, compile and summarise experimental data for review and interpretation		
Operationalise manufacturing of new products	Conceptualise mass production processes for food products using current facilities and equipment			
	Refine recipe formulation for mass production purposes and compliance to regulatory and other requirements			
	Review methods to improve quality of new food products and compliance with food regulations during mass production			
	Troubleshoot new or modified production processes to resolve production, quality and regulatory compliance issues			
	Make recommendations in the design of new manufacturing processes or modify existing equipment or processes			
Conceptualise marketing for products	Verify product formulations and other information for constructing product profiles			
	Conceptualise 'product stories' from food preparation processes for marketing purposes			
Skills & Competencies	Technical Skills and Competencies		Generic Skills and Competencies (Top 5)	
	Active and Smart Packaging	Level 4	Interpersonal Skills	Intermediate
	Advanced Processing Technology	Level 4	Communication	Intermediate
	Change Management	Level 4	Teamwork	Intermediate
	Chemical Risk Management	Level 3	Creative Thinking	Intermediate
	Conflict Resolution	Level 4	Problem Solving	Intermediate
	Continuous Process Improvement	Level 4		
	Data Synthesis	Level 4		
Document Control	Level 3			

	Emergency Response Management	Level 2	
	Food Manufacturing Process Design	Level 4	
	Food Product Marketing	Level 3	
	Food Safety Analysis	Level 4	
	Food Safety Management	Level 2	
	Good Manufacturing Practices Implementation	Level 4	
	Green Manufacturing Design and Implementation	Level 4	
	Hazards and Risk Control, and Policy Management	Level 2	
	Innovation Management	Level 4	
	Laboratory Data Analysis	Level 3	
	Laboratory Management	Level 3	
	New Product Introduction for Food	Level 3	
	Packaging Testing	Level 3	
	Process Validation	Level 3	
	Product Improvement	Level 4	
	Product Testing	Level 3	
	Project Management	Level 4	
	Quality Assurance Management	Level 3	
	Quality System Management	Level 3	
	Recipe Formulation	Level 4	
	Stakeholder Management	Level 3	
	Systems Thinking	Level 4	
	Technical Presentation	Level 4	
	Technical Report Writing	Level 3	
	WSH Performance Management	Level 3	
Programme Listing	For a list of Training Programmes available for the Food Manufacturing sector, please visit: www.skillsfuture.sg/skills-framework/foodmfg		

The information contained in this document serves as a guide.